

RD-250<sub>S</sub>/300<sub>S</sub>

SPECIFICATIONS

SERVICE NOTES

First Edition

Keyboard ..... 76 key, E to G RD-250S  
88 key, A to C RD-300S

Note

16 ..... PIANO 1, PIANO 2, PIANO 3  
VIBRAPHONE, E. PIANO 1

10 ..... HARPSICHORD, CLAVI, E. PIANO 2

Tunable Range ..... ± 15 cents

Output Level ..... H : +10dB, M : 0dB, L : -10dB

Power Consumption ..... 20W : 100V/117V  
25W : 220V/240V

Dimensions ..... 1242 (W) x 461 (D) x 133 (H) mm  
48-7/8 x 18-1/8 x 5-1/4 in.  
1405 (W) x 461 (D) x 133 (H) mm  
55-5/16 x 18-1/8 x 5-1/4 in. RD-300S

Weight ..... 29 kg / 64 lb. RD-250S  
33 kg / 72 lb. 14 oz. RD-300S

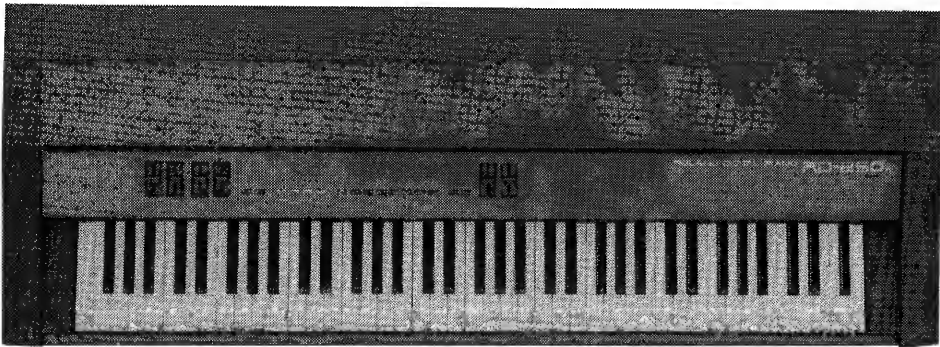


PHOTO RD-250S

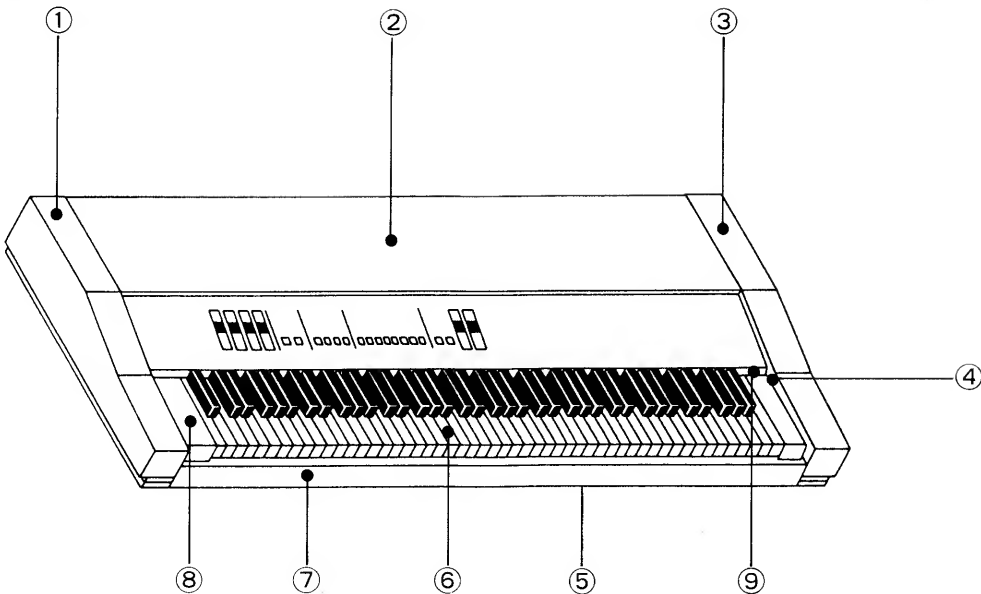
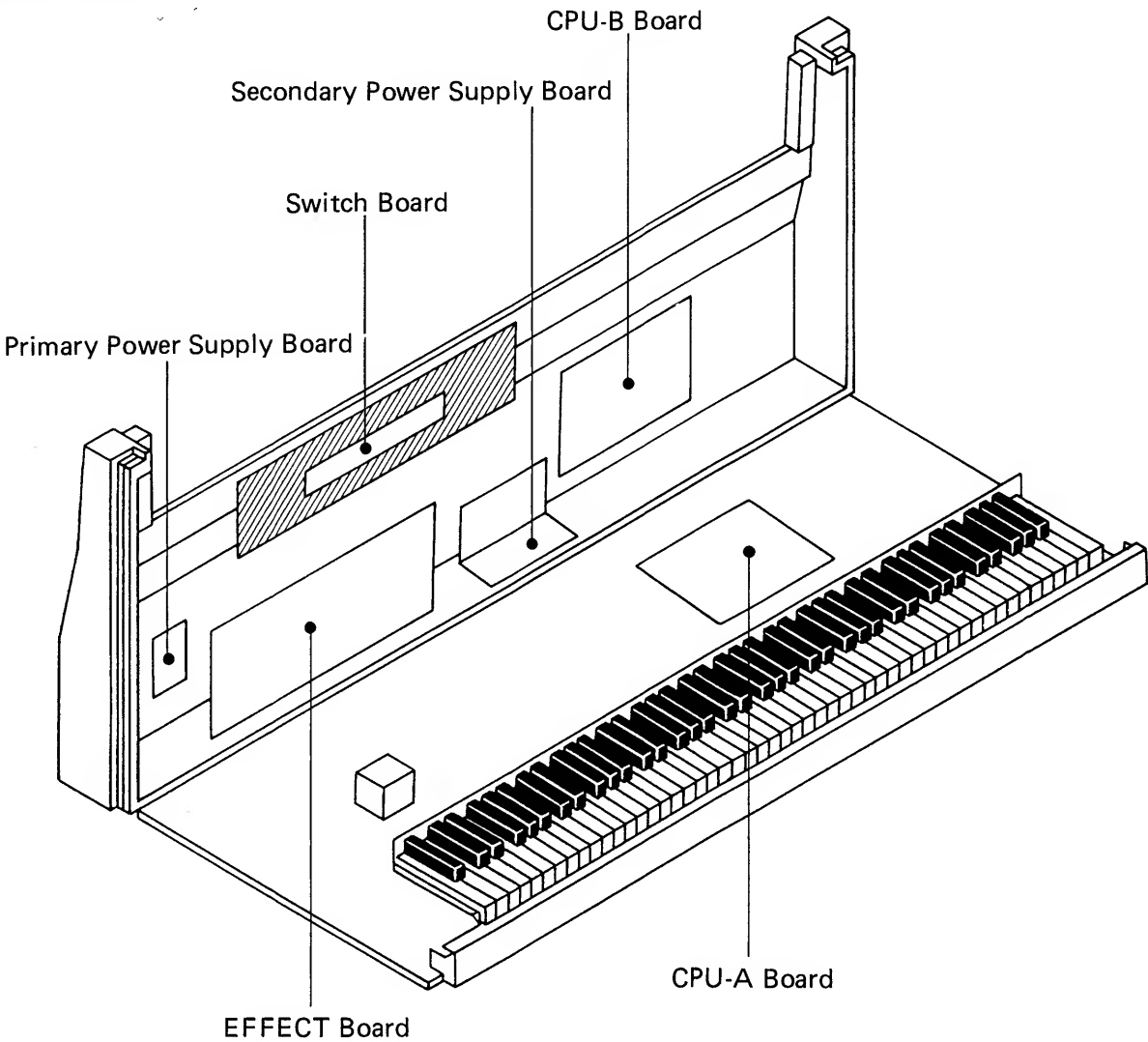
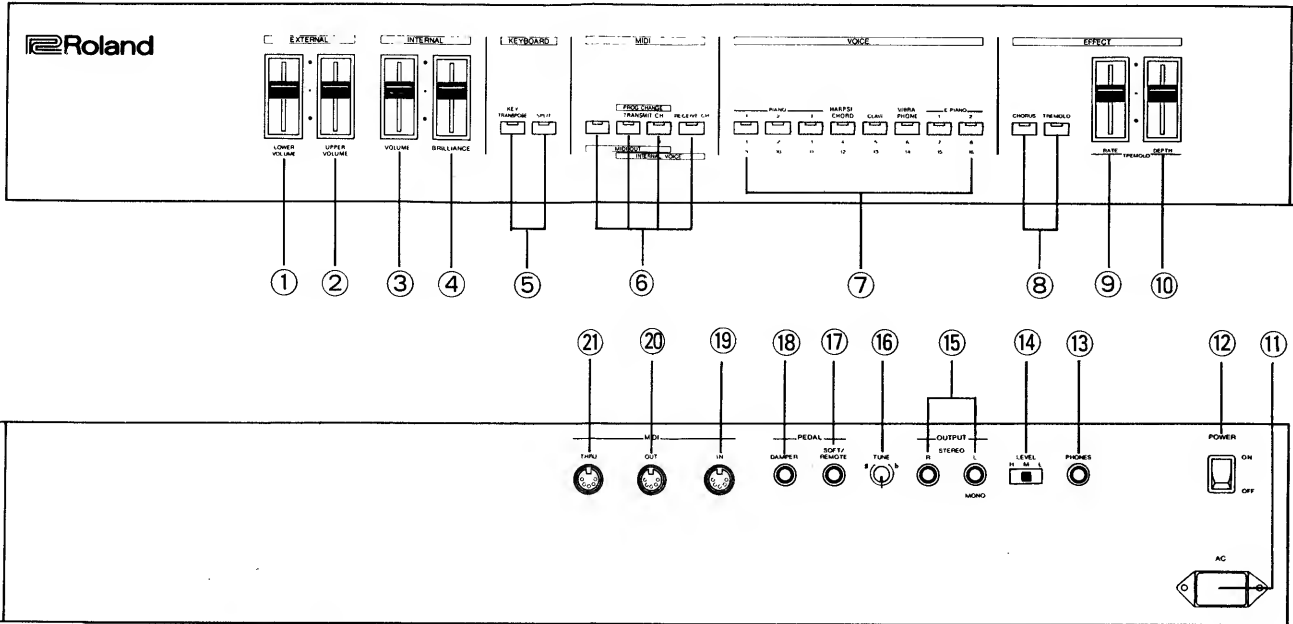


Illustration RD-300S

PCB LOCATION



No.	Part Number	Part Name Description	Model
①	21125277	Side Panel, left 側板 左	common
②	22215570 22215571	Top Panel トップパネル	RD-250S RD-300S
③	21125278	Side Panel, right 側板 右	common
④	22125238 22125239	Plate, left プレート 左 Plate, right プレート 右	common common
⑤	21135165 21135166	Base 底板	RD-250S RD-300S
⑥	7619020000 7619120000	Keyboard Assy SK-676EW 鍵盤完 SK-688EW	RD-250S RD-300S
⑦	21145241 21145242	Blind 口板	RD-250S RD-300S
⑧	21165130	End Block, left/right 拍子木 右/左	common
⑨	22265121	Key Felt キーフェルト	common

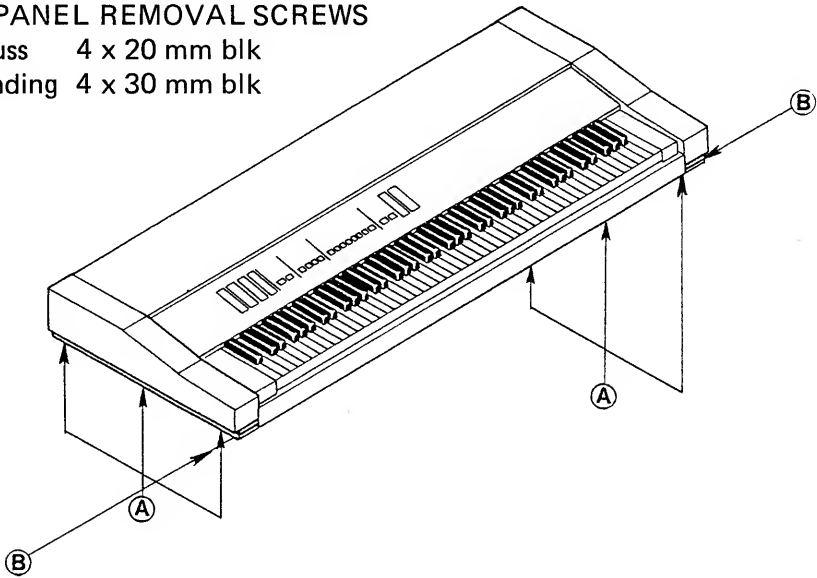


① ②	Knob Escutcheon Pot.	EWA-NFE-x15B14	10KB	22485126 22225320 13339453
③	Knob Escutcheon Pot.	EWA-NA0-x15A14	10KAx2	22485126 22225320 13359356
④	Knob Escutcheon Pot.	EWA-NA0-x15B14	10KBx2	22485126 22225320 13359353
⑤ ⑦ ⑧	Button Switch	black SKHHPM001		22475651 13169668
⑥	Button Switch	gray SKHHPM001		22475652 13169668
⑨	Knob Escutcheon Pot.	EWA-NFE-x15A15	100KB	22485126 22225320 13339453
⑩	Knob Escutcheon Pot.	EWA-NFE-x15A14	10KA	22485126 22225320 13339454
⑪	AC Inlet	PA-126 2P 100/117/220V CM-3 3P 240V		13429710 13429708
⑫	Switch	WK2A443A		13149108
⑬	Jack	YKB-21-5010		13449145
⑭	Switch	HSW0372-01-520		13159322
⑮	Jack	YKB-21-5006		13449252
⑯	Knob Encoder	EVQ-VWKF1531G		22485109 13279291
⑰ ⑱	Jack	YKB21-5012		13449146
⑲ ⑳ ㉑	Socket	TCS5350-01-1111 DIN		13429615

DISASSEMBLY

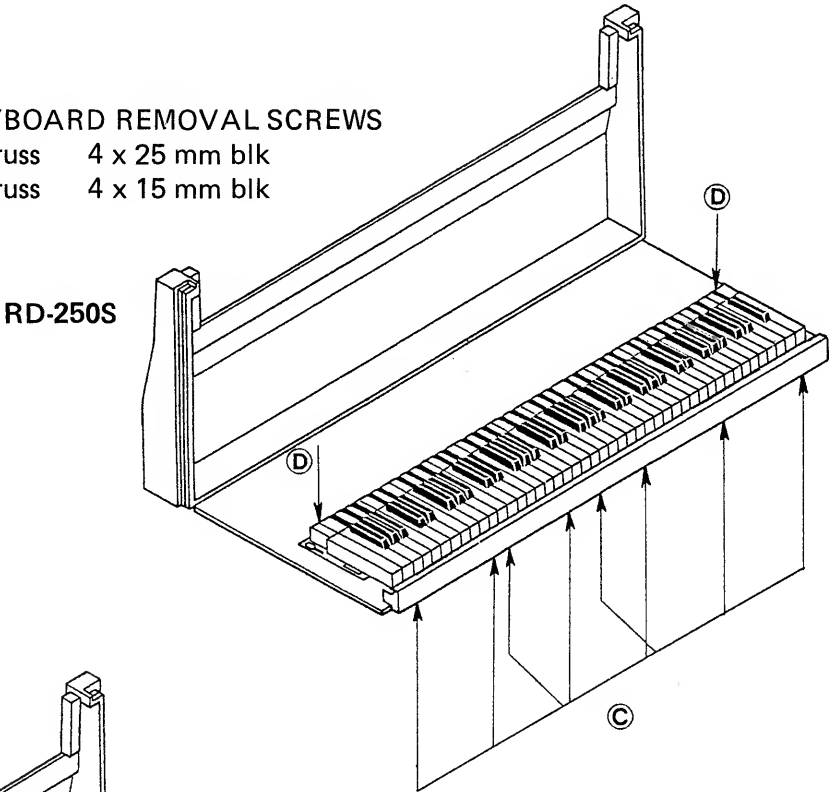
TOP PANEL REMOVAL SCREWS

- Ⓐ Truss 4 x 20 mm blk
- Ⓑ Binding 4 x 30 mm blk

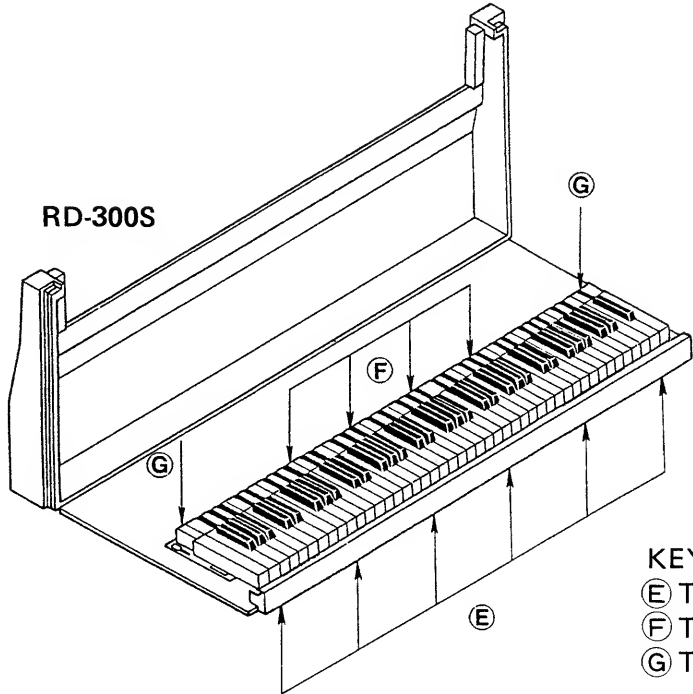


KEYBOARD REMOVAL SCREWS

- Ⓒ Truss 4 x 25 mm blk
- Ⓓ Truss 4 x 15 mm blk



RD-300S



KEYBOARD REMOVAL SCREWS

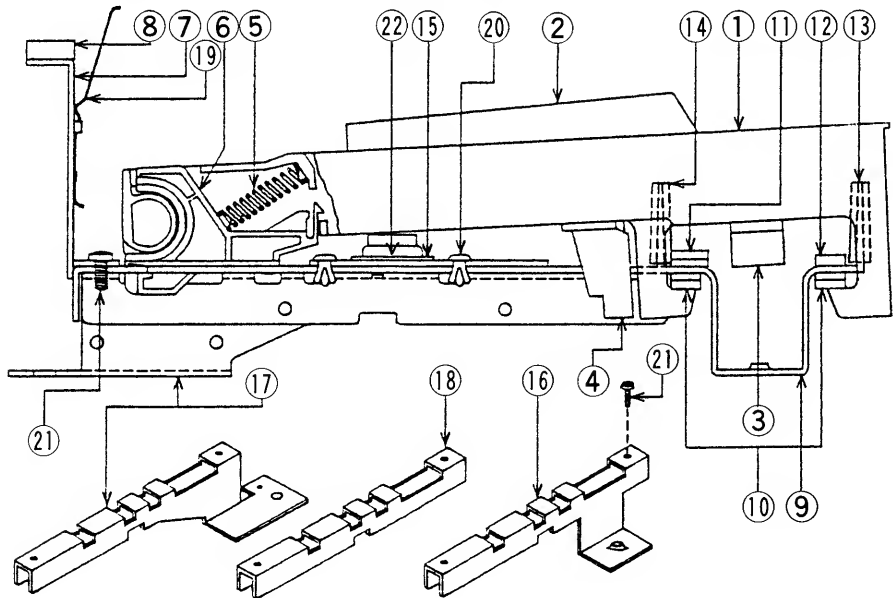
- Ⓔ Truss 4 x 25 mm blk
- Ⓕ Truss 4 x 15 mm blk
- Ⓖ Truss 4 x 12 mm A1 Tapping blk

SK-676-BW  
761902000  
RD-250S

SK-688-EW  
7619120000  
RD-300S

NO.	PART NO.	PART NAME			RD-250S	RD-300S			
(1)	22575202	NATURAL KEY A	白鍵	including: WEIGHT(3); SPRING(5); NATURAL KEY HOLDER(6)	○	○			
	22575203	NATURAL KEY B							
	22575204	NATURAL KEY C							
	22575205	NATURAL KEY D							
	22575206	NATURAL KEY E							
	22575207	NATURAL KEY F							
	22575208	NATURAL KEY G							
	22575209	NATURAL KEY A'					○		
	22575210	NATURAL KEY C'							
	22575231	NATURAL KEY E'					○		
22575232	NATURAL KEY G'								
(2)	22575211	SHARP KEY	黒鍵	including: WEIGHT(4); SPRING(5); SHARP KEY HOLDER(6)					
(3)	22565335	NATURAL KEY WEIGHT	白鍵用オモリ		○	○			
(4)	22565253	SHARP KEY WEIGHT	黒鍵用オモリ						
(5)	22175178	KEY SPRING	キースプリング						
(6)	22195847	NATURAL KEY HOLDER	白鍵用ホルダ						
	22195848	SHARP KEY HOLDER	黒鍵用ホルダ						
(7)	22125578	PANEL ANGLE	パネルアングル	PANEL ANGLE ASSY A 22125579					
(8)	22265478	PANEL ANGLE CUSHION A	クッション A						
(9)	22815536	CHASSIS 88P	シャーシ 88P	CHASSIS ASSY 88P 22815573					
(10)	22265472	FELT STRIP 88P	フェルト 88P						
(11)	22265476	FELT STRIP 88P							
(12)									
(13)	22155747	GUIDE BUSHING A	ガイドブッシュ A		○				
(14)	22155748	GUIDE BUSHING B	ガイドブッシュ B						
(15)	76183220	PCB 24P ASSY LOW		PCB ASSY 76183210 including:RUBBER SWITCH SHEET (22)					
	76183230	PCB 32P ASSY MID							
	76183240	PCB 32P ASSY HI							
(16)	22815574	CHASSIS 76P	シャーシ 76P	CHASSIS ASSY 76P 22815572	○				
(17)	22265475	FELT STRIP 76P	フェルト 76P						
(18)	22265477	FELT STRIP 76P	フェルト 76P						
(19)	22155747	GUIDE BUSHING A	ガイドブッシュ A						
(20)	22155748	GUIDE BUSHING B	ガイドブッシュ B						
	76188220	PCB 24P ASSY LOW					PCB ASSY 7618821000 including:RUBBER SWITCH SHEET (22)		
(21)	76188230	PCB 24P ASSY MID							
	76188240	PCB 28P ASSY HI							
(22)	22035142	STAND							
(23)	22035133	STAND	スタンド						
(24)	22125571	ANGLE BRACKET	アングル		○	○			
(25)	22175502	PANEL ANGLE SPRING	パネルアングルスプリング						
(26)	---	NYLON RIVET 3x5.5mm	ナイロンリベット		○	○			
(27)	---	TAPPING SCREWS 3x8mm	タッピングビス						
(28)	22185224	RUBBER SWITCH SHEET							

\* Not all contacts on the switch sheet キースイッチシート②は、白鍵、黒鍵用で異なります。  
are same. See description on the right. 右の説明参照



SK-6 Rubber Switch Sheet  
Difference Between Natural and Sharp Contacts –  
– Height –

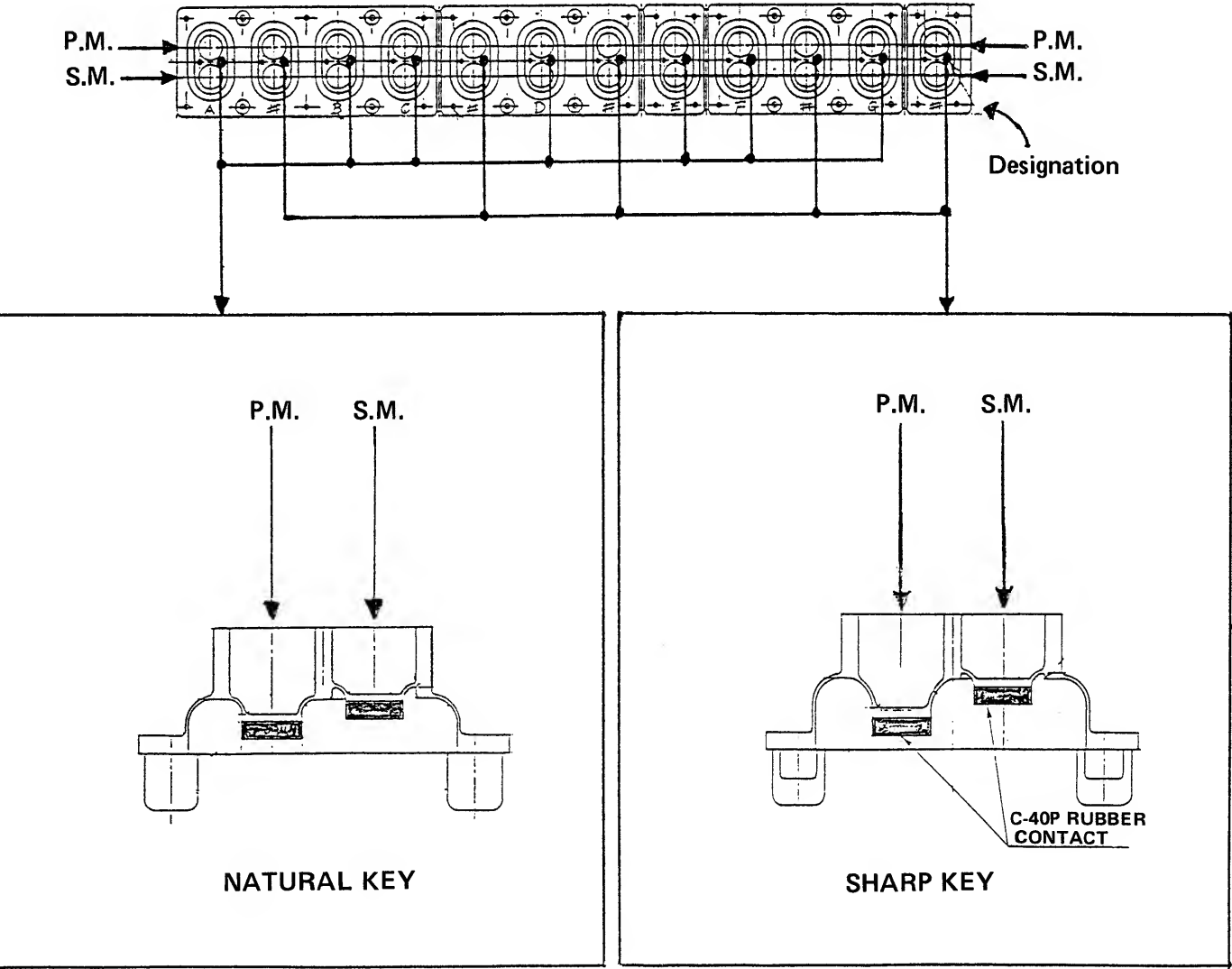
With rubber switch 12 PW218–224 for SK-6 keyboard, natural-key and sharp-key contacts are made to different dimensions. See the figures below and note the height of contacts.  
When replacing contacts, attach the sheet in place, i.e. match characters with keys. Do not cut the sheet at a point other than V-cut with a groove.

**NOTE**  
Replacement SK-6 keyboard and replacement contact PCB are equipped with a complete set of rubber sheets. Sheets are also available as separate replacement.

SK-6用キースイッチシート(ゴム)  
白鍵接点と黒鍵接点の相違点……高さ……

SK-6 鍵盤用のゴムシートスイッチ 12 PW218–224 の白鍵部と黒鍵部は寸法が異なります。下図に示すごとく、接点高さが主要な相違点です。  
接点を交換する際はシート上の記号通りに配置し、切離す場合は溝部分で切断して下さい。

**注**  
SK-6 完又はスイッチPCB完にはスイッチシートが取付済です。  
ただし、スイッチシート単体でも発注可能です。



**PARTS LIST****CABINET キャビネット**

21135165	Base	底板	RD-250S
21135166	Base	底板	RD-300S
21145241	Blind	口板	RD-250S
21145242	Blind	口板	RD-300S
22215570	Top Panel	パネル	RD-250S
22215571	Top Panel	パネル	RD-300S
22125238	Plate	left プレート 左	
22125239	Plate	right プレート 右	
21125277	Side Panel	left 側板 左	
21125278	Side Panel	right 側板 右	
21165130	End Block	拍子木	
22325130	Hinge	ヒンジ	
22265121	Key Felt	キー・フェルト	
22225320	Escutcheon	エスカッション	
12359105	Rubber Foot	ゴム足	
22245447	Slide Pot. Cover	スライド・ボリューム・カバー	
2224010200	Switch Mask	スイッチ・マスク	LEVEL
22465492	Heat Sink	ヒート・シンク	
22195894	Jack Holder	ジャック・ホルダー	
22195837	DIN Holder	DIN・ホルダー	

**PCB ASSEMBLY 基板完成品**

7619006000	CPU-A Board Assy	CPU-A基板完 (pcb 22925394)	RD-250S
7619106000	CPU-A Board Assy	CPU-A基板 完 (pcb 22925394)	RD-300S
7617512000	CPU-B Board Assy	CPU-B基板 完 (pcb 22925348)	
7617517000	Switch Board Assy	スイッチ基板 完 (pcb 22925393)	1/2
7617514000	Effect Board Assy	エフェクト基板 完 (pcb 22925392)	
7617504100	Primary Power Supply Board Assy		
	一次電源基板	100/117V (pcb 22925395)	
7617504400		220/240V (pcb 22925395)	
7617533100	Secondary Power Supply Board Assy		
	二次電源基板	100/117V (pcb 22925353)	1/2
7617533400		220/240V (pcb 22925353)	1/2

**KNOB, BUTTON ツマミ, ボタン**

22485126	Knob	ツマミ	VOLUME; BRILLIANCE; TRE.RATE/DEPTH
22485109	Knob	ツマミ	TUNE
22475651	Button	ボタン 黒 black	
22475652	Button	ボタン 灰 gray	

**JACK, SOCKET ジャック, ソケット**

13449146	YKB21-5012	mono (モノ)	DAMPER; SOFT/REMOTE
13449145	YKB21-5010	stereo (ステレオ)	PHONES
13449252	YKB21-5006	stereo (ステレオ・SW付)	OUTPUT L/R
13429615	TCS5350-01-1111	DIN socket	MID IN/OUT/THRU

**AC INLET AC インレット**

13429710	PA-126	2P	100/117/220V
13429708	CM-3	3P	240V

**SWITCH スイッチ**

13149108	WK2A443A		POWER
13169668	SKHHPM001	light touch	Switch Board
13159322	HSW0372-01-520	slide	OUTPUT LEVEL
13159137	SSSS21067A	slide	TEST/NORM (CPU-A board)

**POWER TRANSFORMER 電源トランス**

22455460U0	245-460U0	100/117/220/240V
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**AC CORD (Detachable) ACコード(脱着式)**

13439825	DC-320-J01	100V (Japan)
13439812F0	UC-704-J01	117V
13439813F0	EC-210-J06	220V
23495110	5722-660-4606	240V-E (England)
13439814F0	SC-415-J06	240V-A (Australia)

**FUSE, FUSE HOLDER ヒューズ, ヒューズ・ホルダー**

12559400	UL TSC 2A-N1	sec. 100/117V
12559397	UL TSC 800mA-N1	sec. 100/117V
12559514	CEE T2A	sec. 220/240V
12559509	CEE T315mA	sec. 220/240V
12559396	UL TSC 630mA-N1	pri. 100/117V
12559507	CEE T200mA	pri. 220/240V
12199550	H0446	fuse holder ヒューズ・ホルダー

**POTENTIOMETER ボリューム**

13359356	EWA-NAO-x15A14	10KAx2	VOLUME
13359353	EWA-NAO-x15B14	10KBx2	BRILLIANCE
13339455	EWA-NFE-x15B14	10KB	EXT LOWER/UPPER VOLUME
13339453	EWA-NFE-x15A15	100KB	TREMOLO RATE
13339454	EWA-NFE-x15A14	10KA	TREMOLO DEPTH
13299177	RHE0A140XA	10KB Trimmer	

**TRANSISTOR トランジスタ**

15119134	2SA933S	
15129153	2SC1740S	
15139123	2SK184	
15119139	DTA144E	w/bias resistor
15129168	DTC124E	w/bias resistor
15139121	2SK117 GR	FET
15119184	2SB1015-0	
15129834	2SD1408-0	
15129152	2SC2878A	
15139124	2SD363	FET

**DIODE ダイオード**

15019152T0	1SS176	
15029152	GL-9HD12	LED red
15019290	DBA40C-K15	
15019272	2B4B41-LC2	
15019208	1SR35-200	
15019412	MTZ4.7B	
15019103T0	1S2473	

**RESISTOR ARRAY 抵抗アレイ**

13919153M0	RGLD5x103J	10K x 5
13919140	RGLD8x103J	10K x 8
13919311M0	RGLD8x223J	22K x 8
13919316	RGLD4x472J	4.7K x 4
13919113	RGLD4x103J	10K x 4
13919308M0	RGLD6x103J	10K x 6
13919181	RGLD10x153J	15K x 10
13919180	RGLD12x153J	15K x 12
13919142	RGLD8x104J	100K x 8
13919118	RGSD16L104G	ladder resistor

**IC**

15179203	HD63803RP	CPU	
15229830	MB63H149	gate array	CPU-A board IC 10
15179343F0	MB8416A-12-SK-G	2Kx8 bit static RAM	
15179815	TMM2764D-815 ROM A	2Kx8 bit EPROM	CPU-A board IC 15
15179794	TMM2764D-794 ROM B	2Kx8 bit EPROM	CPU-B board IC 17
15179834	M5M2364-316P ROM C	2Kx8 bit MASK ROM	CPU-B board IC 11
15179810	TC531000P-7465	1Kx8 bit MASK ROM	WAVE A0
or			CPU-B board IC 7
15179810F0	MB831000-20P-G-471		
15179811	TC531000P-7466	1Kx8 bit MASK ROM	WAVE B0
or			CPU-B board IC 6
15179811F0	MB831000-20P-G-472		
15179812	TC531000P-7467	1K-8 bit MASK ROM	WAVE C0
or			CPU-B board IC 5
15179812F0	MB831000-20P-G-473		
15179838	MB831000-20P-G-474	1Kx8 bit MASK ROM	CPU-B board IC 18
15159503	TC40H000P	quad 2 input NAND gate	
15159505	TC40H004P	hex inverter	
15159514	TC40H032P	quad 2 input OR gate	
15159506	TC40H138P	2 to 8 line decoder/demultiplexer	
15159511	TC40H174P	hex D type flip-flop	
15159530	TC40H367P	hex bus buffer	
15159508	TC40H373P	octal D type latch (3 state output)	
15159531	TC40H374P	octal D type flip-flop	
		(3 state output)	
15159519	TC40H157P	quad 2 to 1 line selector/multiplexer	
15169359X0	SN74LS541N	octal buffers and line drivers	
		(3 state output)	
15189158	μPC-4082C	operational amplifier	
15189111J1	NJM-311D	operational amplifier	
15189189	μPC4570HA	operational amplifier	
15189148	NJM072S	operational amplifier	
15189190	M5216L	operational amplifier	
15159115T0	TC4066BP	quadruple bilatch switch	
15199106NH	μPC7805H	+5 voltage regulator	
15199117	M5230L	voltage regulator	
15169334H0	HD74LS05	hex inverter with open collector	
		output	
15159303T0	TC4584BP	hex schmitt trigger	
15219163	NE572	programmable analog compander	
15219179	M5206P	dual voltage controlled amplifier	
15219205	MN3007	1024-stage BBD	
15169504	MN3101	BBD driver	
15229706S0	PC-910	Optoisolator	
15229837	MB60VH142PF-G-B	gate array	R06-001
15229838	MB60V141PF-G-B	gate array	R06-002
15229839	MB61V125PF-G	gate array	R06-003
15179734	MB7138H	bipolar plain output PROM	
15219162	PCM54HP	16 bit D/A converter	
15169301H0	HD74LS00P	quadruple 2-input positive NAND gate	
15219174	NJU201AD	quad spst analog switch	

**CAPACITOR ARRAY コンデンサ・アレイ**

13529118	B5RC0139-32N	22Px4
13529113	B7ZC0724-32N	22Px6
13529115	EXFP8101MN	

**CRYSTAL 発振子**

12389747	HC-49/U	16MHz
12389751	HC-49/U	12.8MHz

**COLLAR/BUSHING カラー/ブッシュ**

12159715	TB-300	male	オス
12159713	TA-305P	female	メス
12159733	TA-310	female	メス

**CAPACITOR コンデンサ**

13659201	ECET16R682SW	6800μF/16V	
13659222M0	ECET35R222SW	2200μF/35V	
13529104	DE7150F472MVAI	0.0047μF	ラインバイパス line bypass

**ROTARY ENCODER ロータリーエンコーダ**

13279291	EVQ-WVKF1531G	TUNE
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**KEYBOARD ASSY 鍵盤**

7619020000	SK-676-BW	RD-250S
7619120000	SK-688-BW	RD-300S

**MISCELLANEOUS その他**

22445240	Ferrite Bead	BL02RN2-R62	フェライト・ビーズ
12449269	Low-pass Filter	0538-014	ローパス・フィルター

**SK-6 KEY REMOVAL LEVER**

A lever as shown in Fig. 1 is required in SK-6 key removal.

Consult your local Roland service center for availability. If not available, make a lever following the instructions described below.

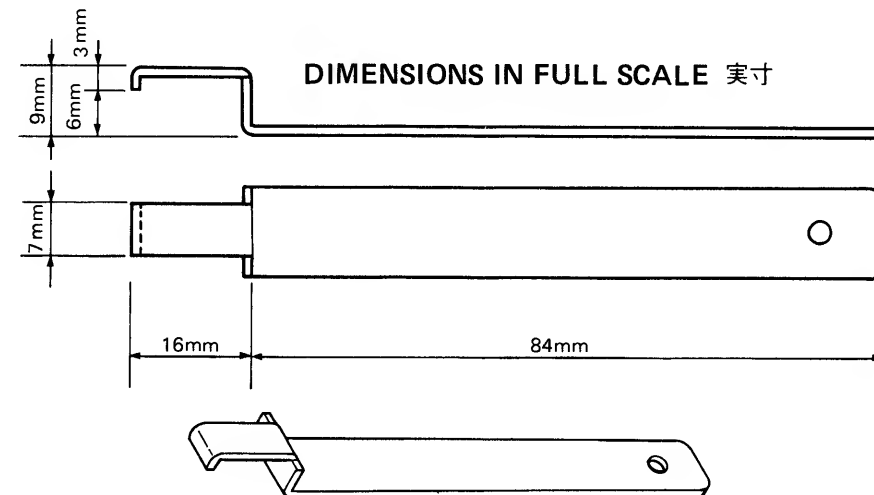


Fig. 1

**SUBSTITUTIVE LEVER**

1. Prepare a length of wire (more than 95mm or 3.8 in.). A paper clip is a most typical one.
2. (If a coiled wire as example of a paper clip.) Uncoil and straighten the wire.
3. Reshape the wire to Fig. 2, with the dimensions exactly matching the values given in the figure.
4. Prepare a separate key (may be a replacement to be used, natural or black.).
5. Grasp key and key holder at ① in Fig. 3 with thumb and forefinger to allow the holder goes to the bottom. Retain tension on holder at this point. And insert the key removal lever into key to hook the latch lock. ② in Fig. 3.
6. Release key holder. When the holder remains locked, ②, the lever you made now passes the acceptance test, and ready to work on the keyboard.

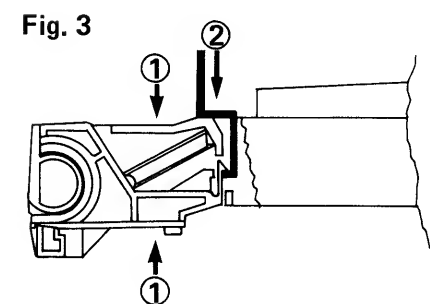
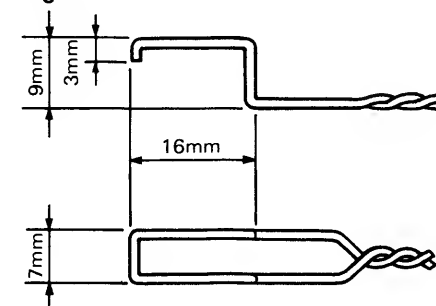


Fig. 3

Fig. 2



DIMENSIONS IN FULL SCALE 実寸

**SK-6 取外しレバー**

SK-6 の鍵盤からキーを取外すには Fig.1 に示す様なレバーが必要です。入手に関してはローランドのサービスセンターへお問合せ下さい。

**レバーの作製手順**

取外しレバーが無い場合は下記要領で作製して下さい。

1. 針金 (ゼムクリップ等、長さは 95mm 以上) を準備する。
2. この針金を Fig.2 のサイズに合わせて折り曲げる。
3. 補修用のキー (白鍵もしくは黒鍵) 1 個を用意する。
4. Fig.3 の①の部分をつかみキーホルダーを押え込む。この状態で針金の先端がキーホルダーのツメに引っかける様にキー上部から挿入する②。キーホルダーから手を離す。Fig.3 の様にキーホルダーがロックされた状態なら OK です。

**SK-6 KEY REMOVAL****Natural Key (Fig. 1)**

1. Depress and hold the key at the front end ① and then insert key removal lever ② so that its tip goes below the latch lock. Leave the lever in this state.
2. While lifting up the key front with one hand ③, press the rear end of the key to move the key toward front of the unit. ④.

**Black Key**

1. Follow step in 1 above.
2. Lift key at front ③ and then move it toward the rear of the unit ⑤.

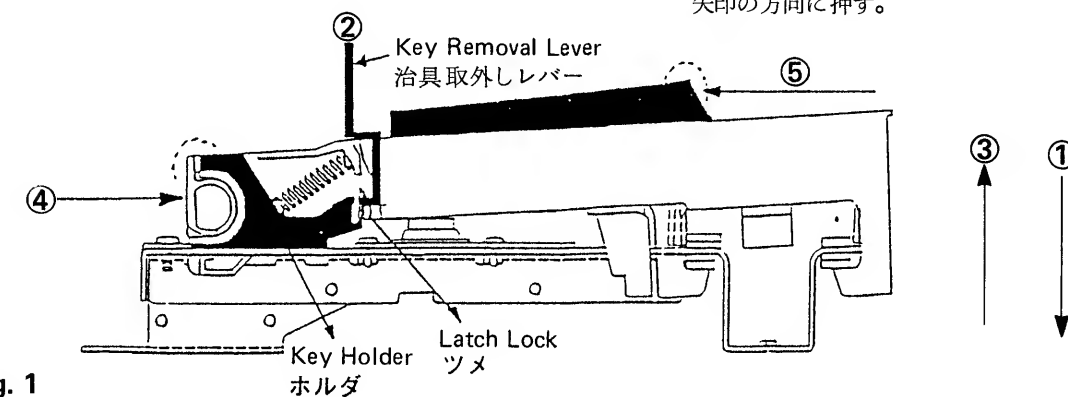


Fig. 1

**SK-6 KEY REASSEMBLY**

\* Mounting a key does not require the key removal lever.

**Natural Key/Black Key (Fig. 2)**

1. Finger-pinch the key and key holder at ①. Press and release the button on the holder and verify the smooth operation. Pressing the holder to the bottom makes a mechanical noise. This will not occur once installed on the keyboard whose mechanism prevents extensive key swing. Refer to "Hints On Key Mounting", as necessary.
2. Engage the forward hook on the key in the key chassis bracket ②.
- 3a. Natural Key  
Depress the key on the rear and move it toward the rear of the unit until key holder tip engages chassis notch. ③.
- 3b. Black Key  
Depress the key on the rear and move it toward the front of the unit until the blade on the key engages chassis notch. ④.
4. Check the key for noise and dragging. For corrective adjustment, if necessary, refer to "Hints On Key Mounting".

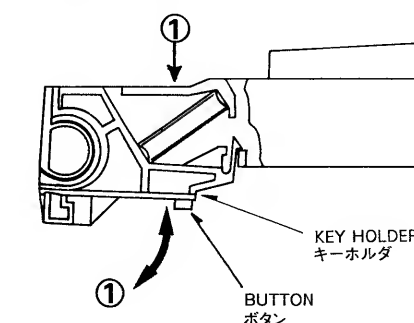


Fig. 2

**SK-6 キー取外し方 (Fig.1)****白鍵**

1. (取外す) キーを押しながら "鍵盤取外し治具" をキーホルダーのツメに引っかける様に挿入する②。
2. キーの前端を持ち上げながら③、キーの後端を④の矢印方向に押す。

**黒鍵**

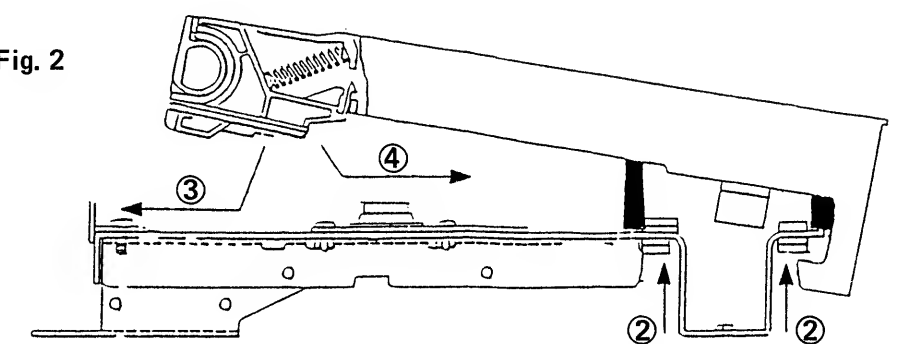
1. 白鍵 "1" と同様に治具を挿入し、治具から手を離す。
2. キーの前端を持ち上げ、この状態で図⑤の点線部分を矢印の方向に押す。

**SK-6 キー取付け方 (Fig.2)**

\*取付け時には、治具を必要としません。

**白鍵,黒鍵**

1. キーの①の部分をつかみ、下部のホルダーを数回出し入れして異音の有無と動きのスムーズさをチェックする。強く押すとホルダーの当たる音があるが、実際に鍵盤に取付けた場合は生じない。異常のある場合は "キー交換上のヒント" 参照。
2. キーの前端を②の様にガイドに当てる。
- 3a. 白鍵  
キーの後端を下へ押しつけながら③の方向にスライドさせる。
- 3b. 黒鍵  
キーの後端を下へ押しつけながら④の方向にスライドさせる。
4. 異音が出たり、タッチが重すぎる場合は "キー交換上のヒント" 参照。

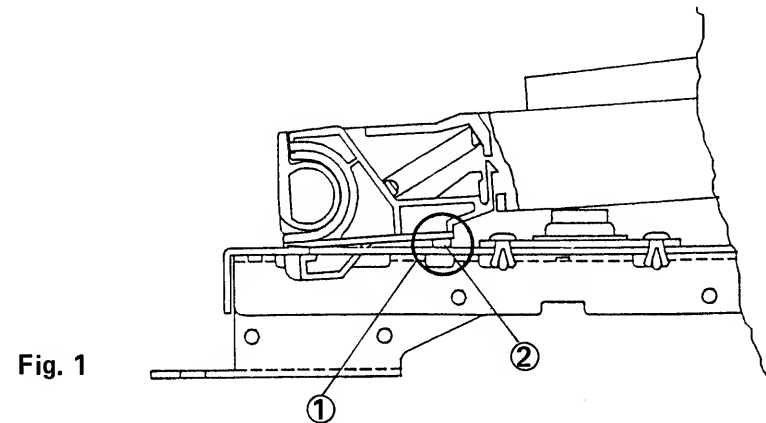




### Hints On Key Mounting

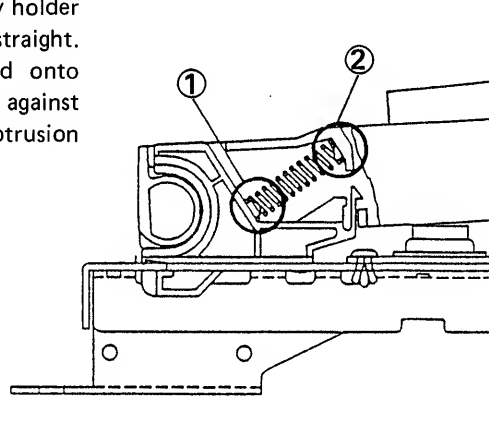
#### Key Noise (Figs. 1 and 2)

1. There is a possibility that a virgin key makes a noise as it is played. This is because the rough button ② on the key cannot fit into chassis hole, leaving clearance ① between key bottom and chassis smooth away button outer surface.



**Fig. 1**

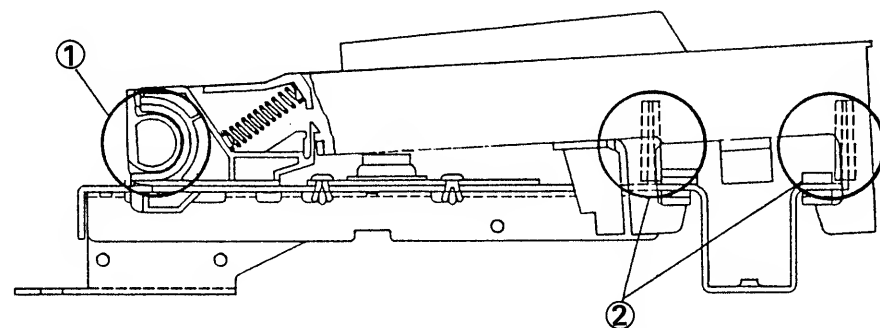
2. The spring, having been not properly inserted onto protrusion(s) ① , ② on the key holder, may make a noise or cause disturbed key stroke. To check the spring first remove the key, then open the key holder . . . grasp holder around the button and pull straight. To reinsert the spring, first slip spring end onto protrusion ① . Leave the spring as it rests against holder by its gravity. Align spring end with protrusion ② and close the holder.



**Fig. 2**

### Dragging Key (Fig. 3)

A torque grease is applied to portion ① .  
Wiping off a coat of grease makes key touch lighter.  
NOTE: A different kind of grease is used on portions②.



**Fig. 3**

- ① . . . . . Torque grease トルクグリス (G-424F type)  
② . . . . . Machine grease 機構グリス (G-336A type)

## キー交換上のヒント

### ◎キー異音が場合 (Fig.1,2)

1. この原因となるのは、ホルダとシャーシ間に隙間①があるためです。キーが新しい場合はキーホルダの②の部分になじみが無いためで、2、3回シャーシの穴に抜き差しするとスムーズに入ります。

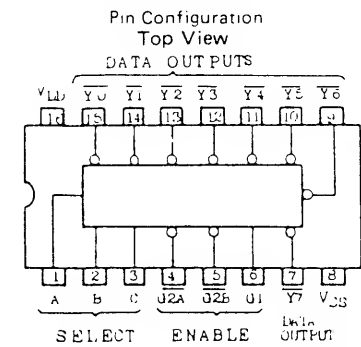
2. 下図の凸部①, ②にスプリングがきっちりハマっていないと異音、スプリング重さの原因となります。

### ◎キーが比較的重い場合 (Fig.3)

下図①にはトルクグリスが使用されています。  
これを少し拭きとるとキータッチが軽くなります。  
(参考: なお、②にもグリスが使用されていますが、これは種類が異なります。)

## IC DATA

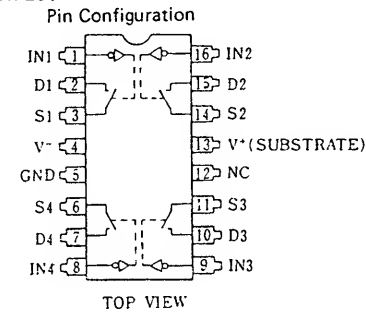
# TC40H138P 3-TO-8-LINE DECODER/DEMULTIPLEXER



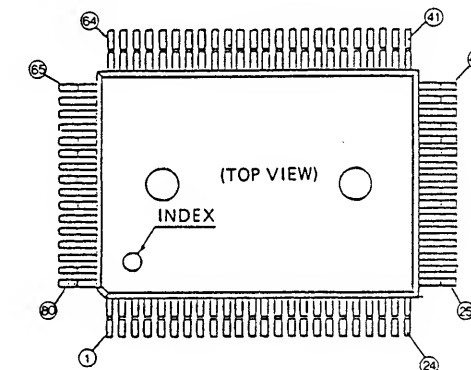
Truth Table			SELECT	ENABLE	OUTPUTS								
INPUTS						OUTPUTS							
ENABLE			SELECT										
Q1	Q2A	Q2B	A	B	C	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7
L	*	*	*	*	*	H	H	H	H	H	H	H	H
L	H	*	*	*	*	H	H	H	H	H	H	H	H
*	*	H	*	*	*	H	H	H	H	H	H	H	H
H	L	L	L	L	L	L	H	H	H	H	H	H	H
H	L	L	H	L	L	H	L	H	H	H	H	H	H
H	L	L	L	H	L	H	H	L	H	H	H	H	H
H	L	L	H	H	L	H	H	L	H	L	H	H	H
H	L	L	L	L	H	H	H	H	H	L	H	H	H
H	L	L	H	L	H	H	H	H	H	L	H	H	H
H	L	L	L	H	H	H	H	H	H	H	L	H	H
H	L	L	H	H	H	H	H	H	H	H	H	L	L

\* : Don't care

## HI-201

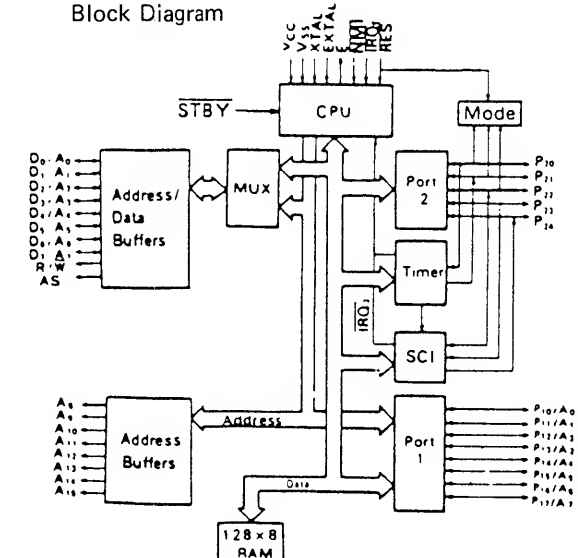
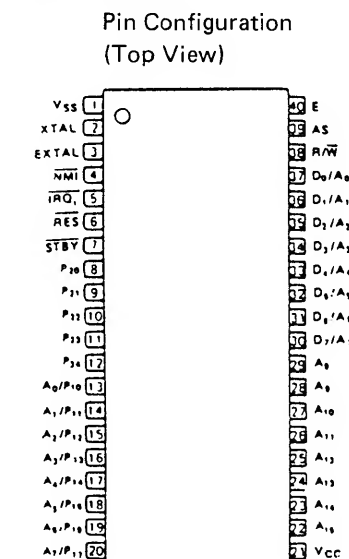


## MB63H149 Pin Assignment

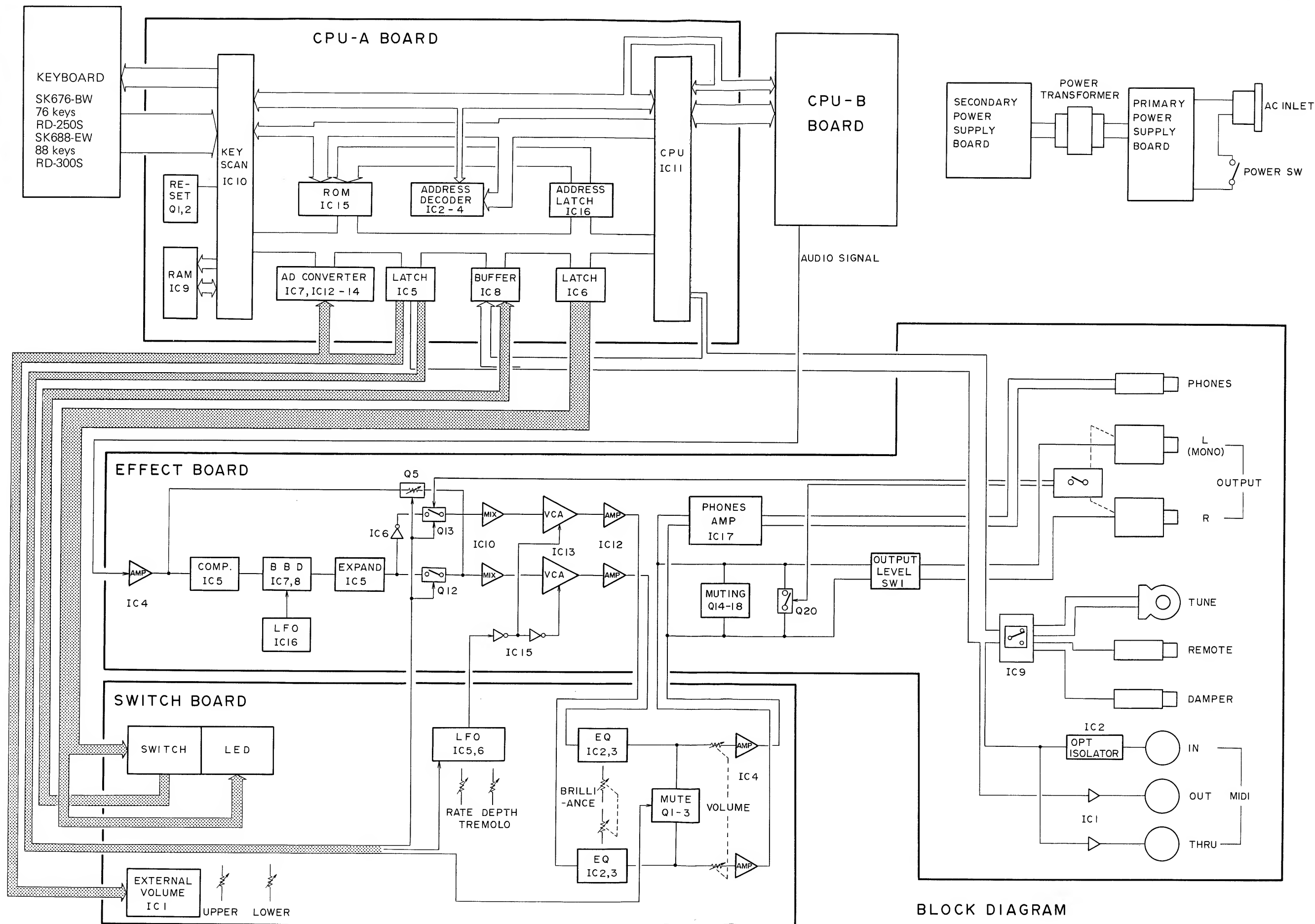


Pfn no.	I/O	Pfn name	Pfn no.	WG	Pfn name	Pfn no.	I/O	Pfn name	Pfn no.	I/O	Pfn name
1	0	B7	21	1	BR9	41	1	CD	61	0	RA1
2	1	T70	22	1	MK9	42	1	CA8	62	0	RA2
3	1	MK0	23	1	BR10	43	1	CA9	63	0	RA3
4	1	BR1	24	1	MK10	44	1	CA10	64	1	FOE
5	1	MK1	25	1	RES	45	1	CS	65	0	RA3
6	1	BF2	26	1/0	EXCK	46	1	XT1	66	0	RWE
7	1	MK2	27	1	E	47	0	XT2	67	0	RA4
8	1	BR3	28	0	INT	48	0	ASEL	68	0	RA9
9	1	MK3	29	1	AS	49	1	MOD1	69	0	RA5
10	1	BR4	30	0	CRES	50	1	MOD2	70	0	RA8
11	1	MK4	31	1	CRNW	51	1/0	RD3	71	0	RA6
12	--	VSS	32	0	SRCK	52	--	VSS	72	0	RA7
13	1	BR5	33	--	VDD	53	1/0	RD4	73	--	VDD
14	1	MK5	34	1/0	CD0	54	1/0	RD2	74	0	T0
15	1	BR6	35	1/0	CD1	55	1/0	RD5	75	0	T1
16	1	MK6	36	1/0	CD2	56	1/0	RD1	76	0	T2
17	1	BR7	37	1/0	CD3	57	1/0	RD6	77	0	T3
18	1	MK7	38	1/0	CD4	58	1/0	RD0	78	0	T4
19	1	BR8	39	1/0	CD5	59	1/0	RD7	79	0	T5
20	1	MK8	40	1/0	CD6	60	0	RA0	80	0	T6

HD63B03RP



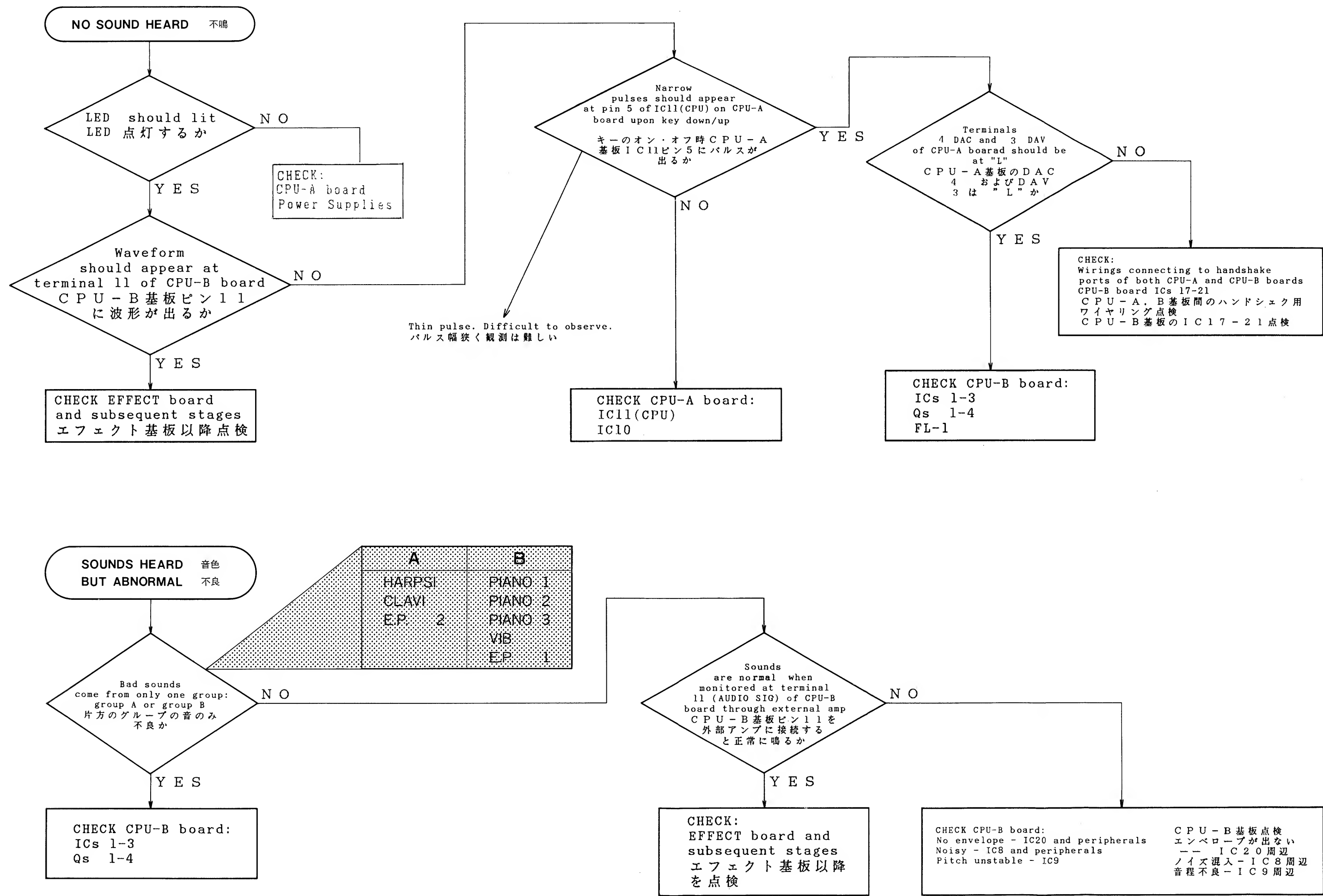
## BLOCK DIAGRAM



BLOCK DIAGRAM

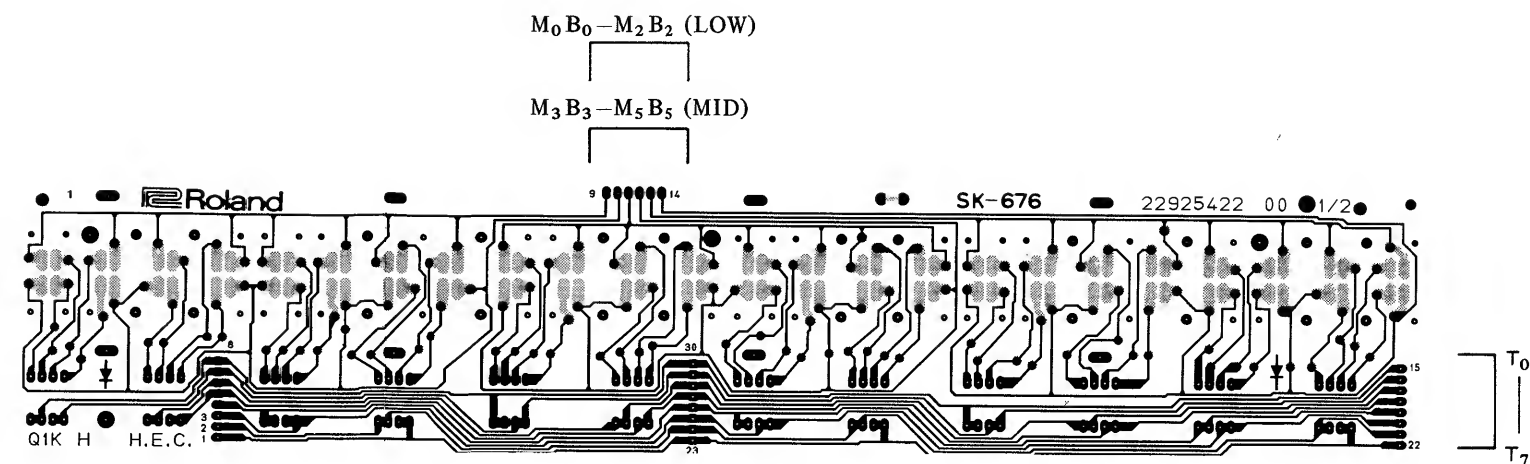


TROUBLESHOOTING Logic Tree
トラブルシューティング・ガイド

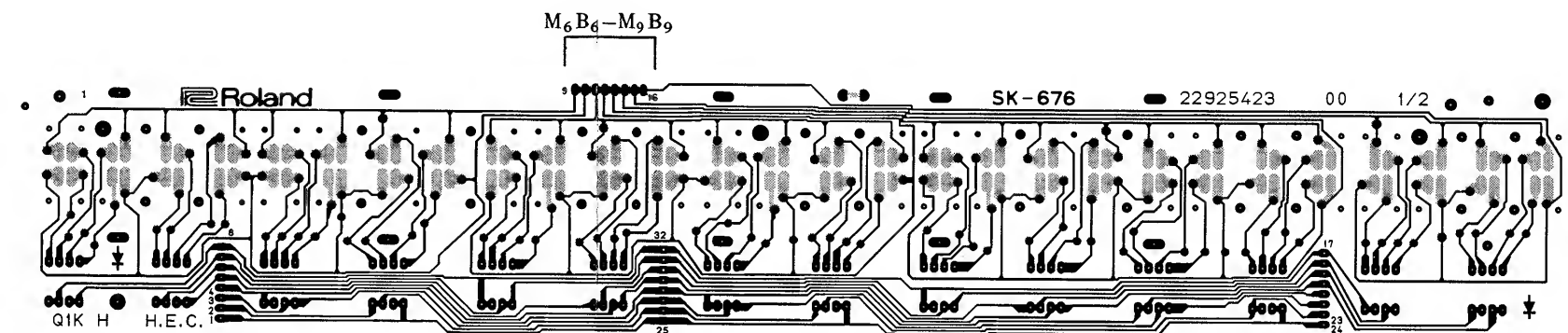


## RD-250S

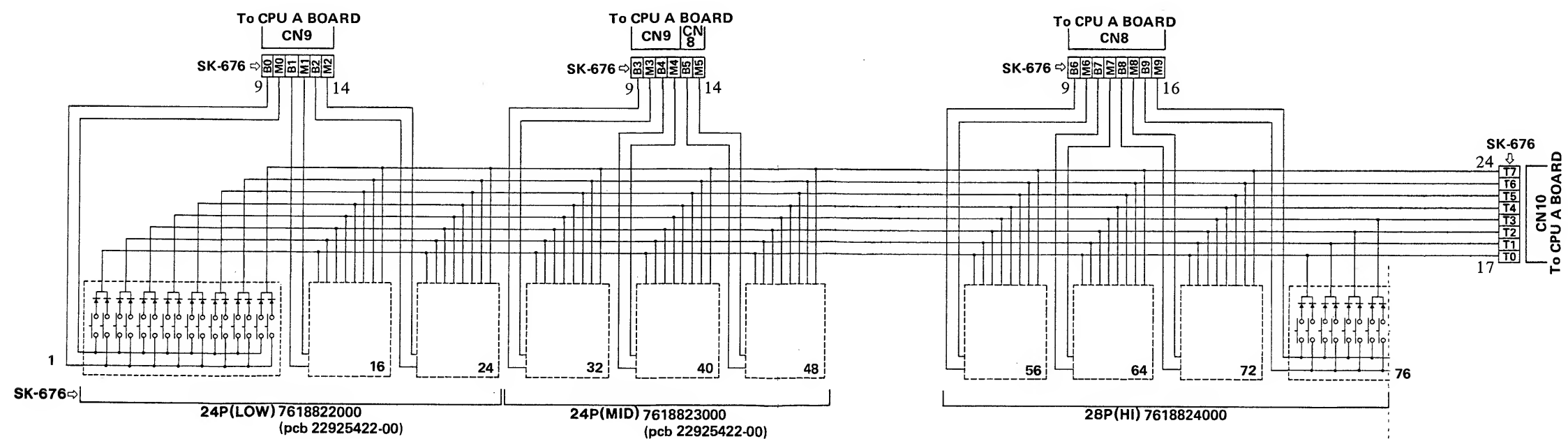
SK-676 PCB 24P (LOW) ASSY 7618822000  
 SK-676 PCB 24P (MID) ASSY 7618823000



SK-676 PCB 28P (HI)  
 ASSY 7618824000

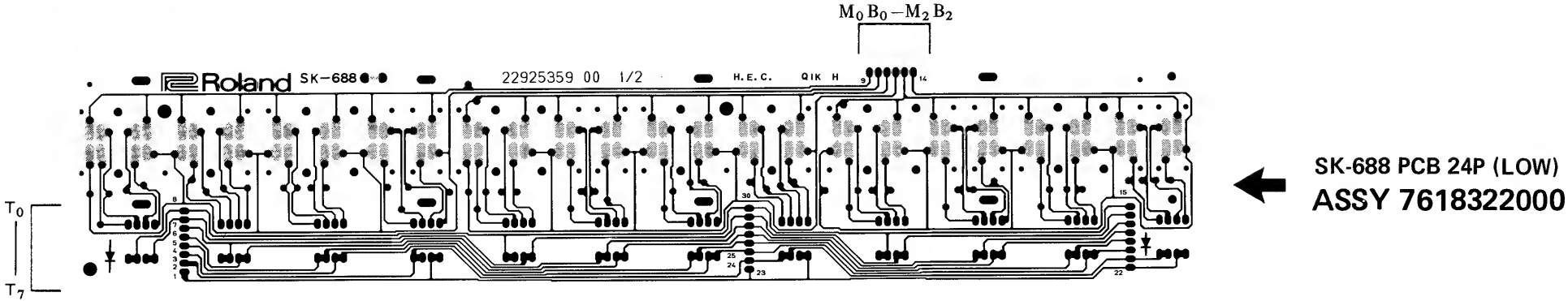


## SK-676

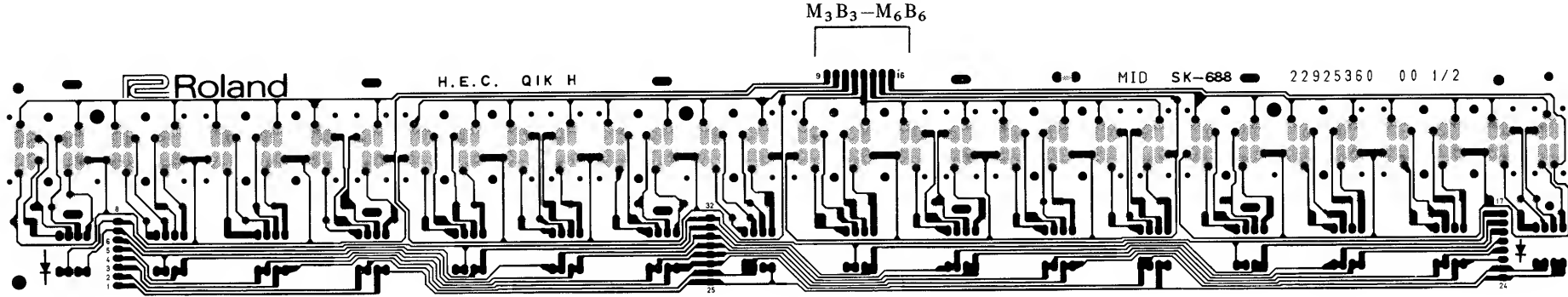


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

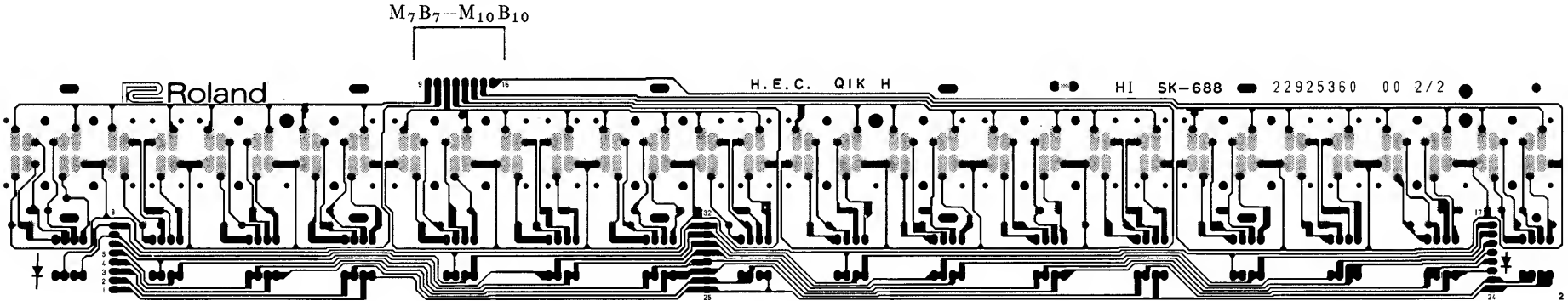
RD-300S



SK-688 PCB 24P (LOW)  
ASSY 7618322000

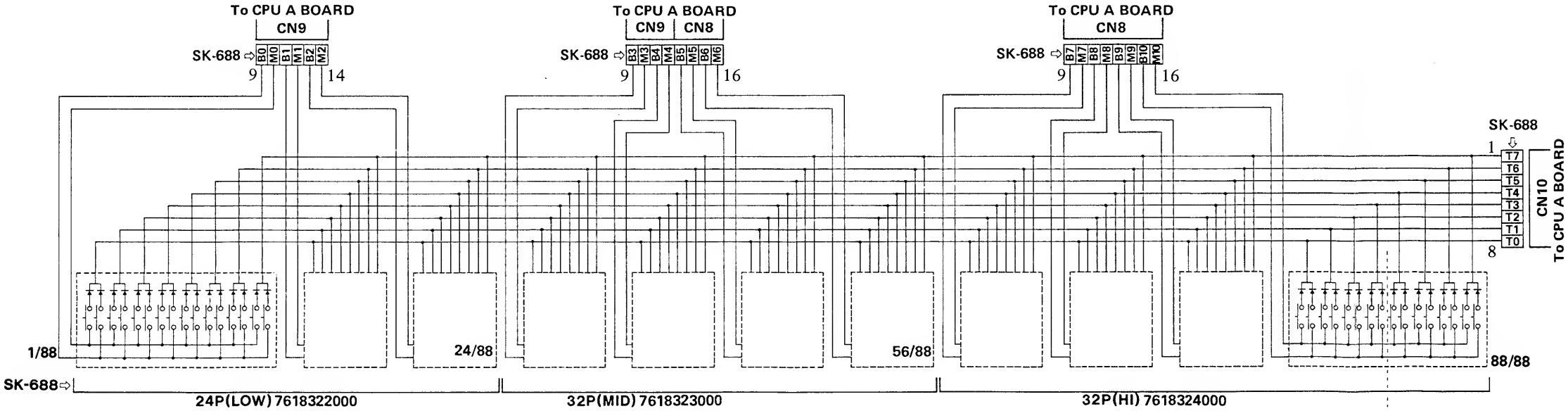


SK-688 PCB 32P (MID)  
ASSY 7618323000

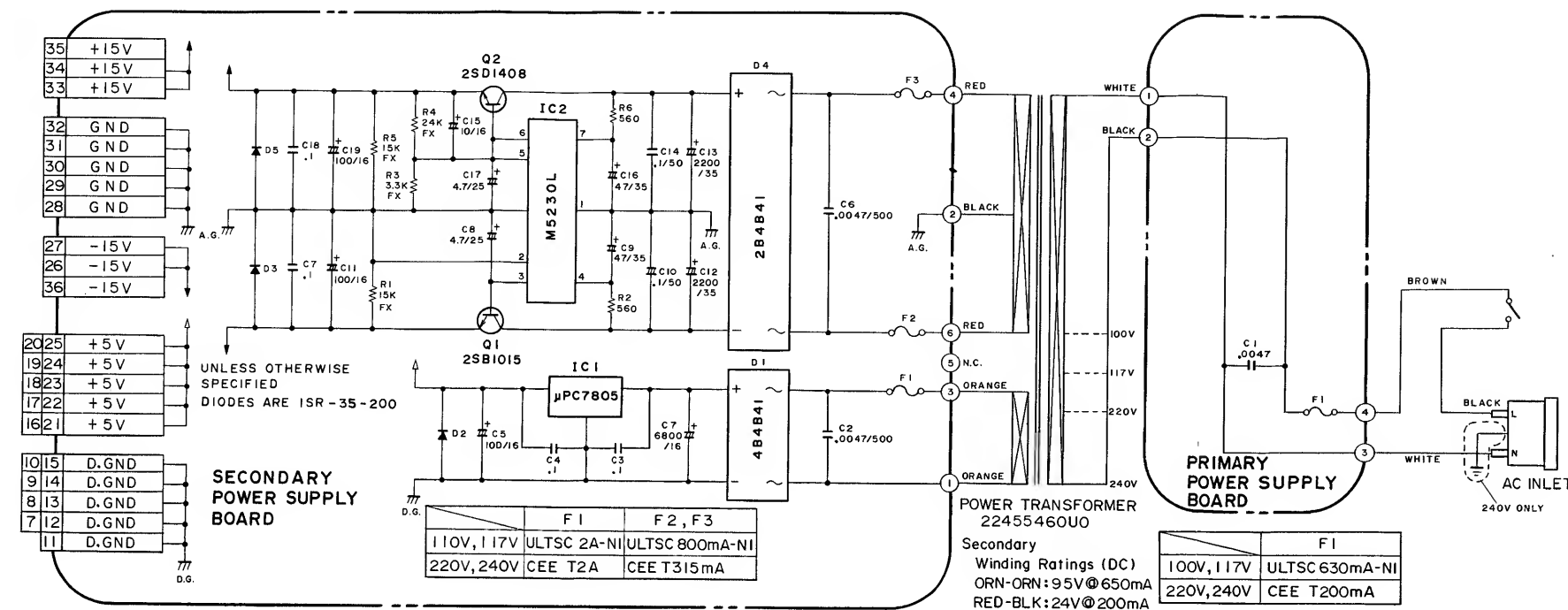


SK-688 PCB 32P (HI)  
ASSY 7618324000

SK-688



## CIRCUIT DIAGRAM



## Common PCB

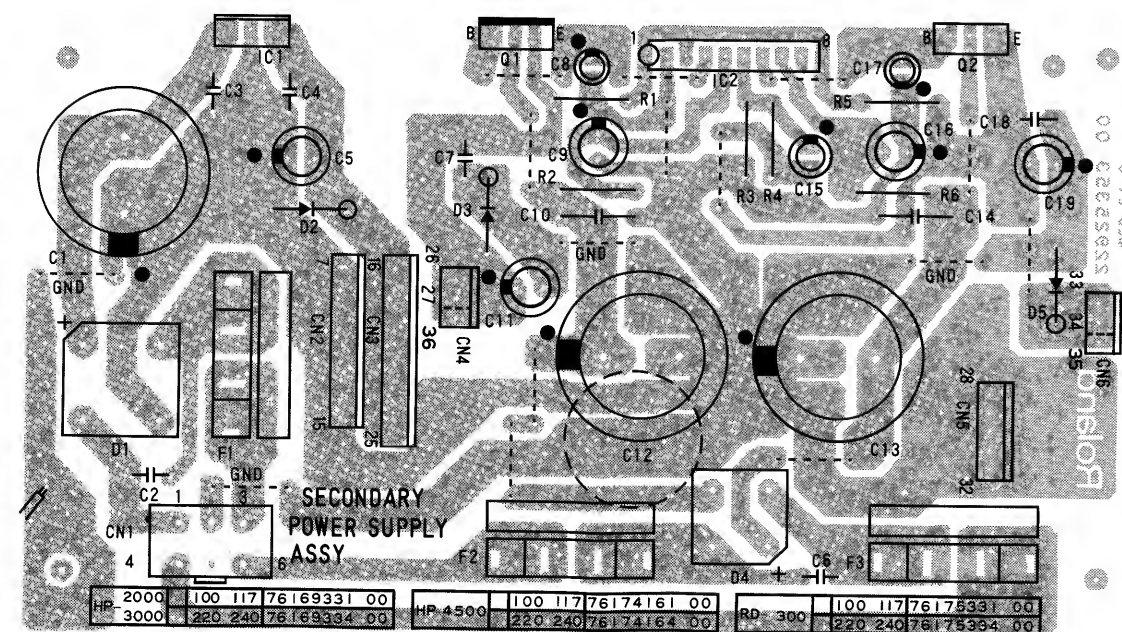
Secondary Power Supply Board finds application on many models. The table below is provided as a guide when need arises to substitute one PCB for another.

## 共通基板

二次電源基板は下表のごとく多くの機種に共通。  
流用の際の参考として共通点及び相違点を示してあります。

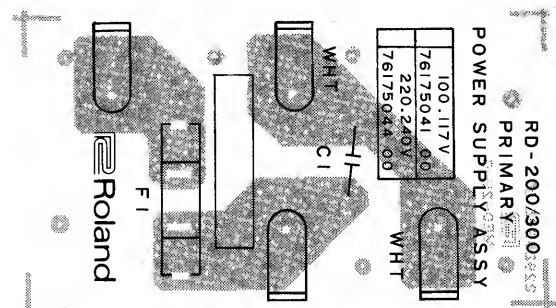
## SECONDARY POWER SUPPLY BOARD

7617533100 100/117V  
7617533400 220/240V  
(pcb 22925353)



## PRIMARY POWER SUPPLY BOARD

7617504100 100/117V  
7617504400 220/240V

Secondary Power Supply Board  
Replacement Consideration

## 1. Heat Sink

Do not remove the heat sink on the top panel. Instead, remove the one on the replacement PCB. Reinstallation of the heat sink on the panel is difficult to achieve by one person.

## 2. Substitutive

As can be seen from the table below, secondary power supply boards listed are easily interchangeable with each other with minor modifications.  
When substituting, use in-system components, as required.  
When ordering, specify the line voltage to be operated from to get the correct PCB.

= Common

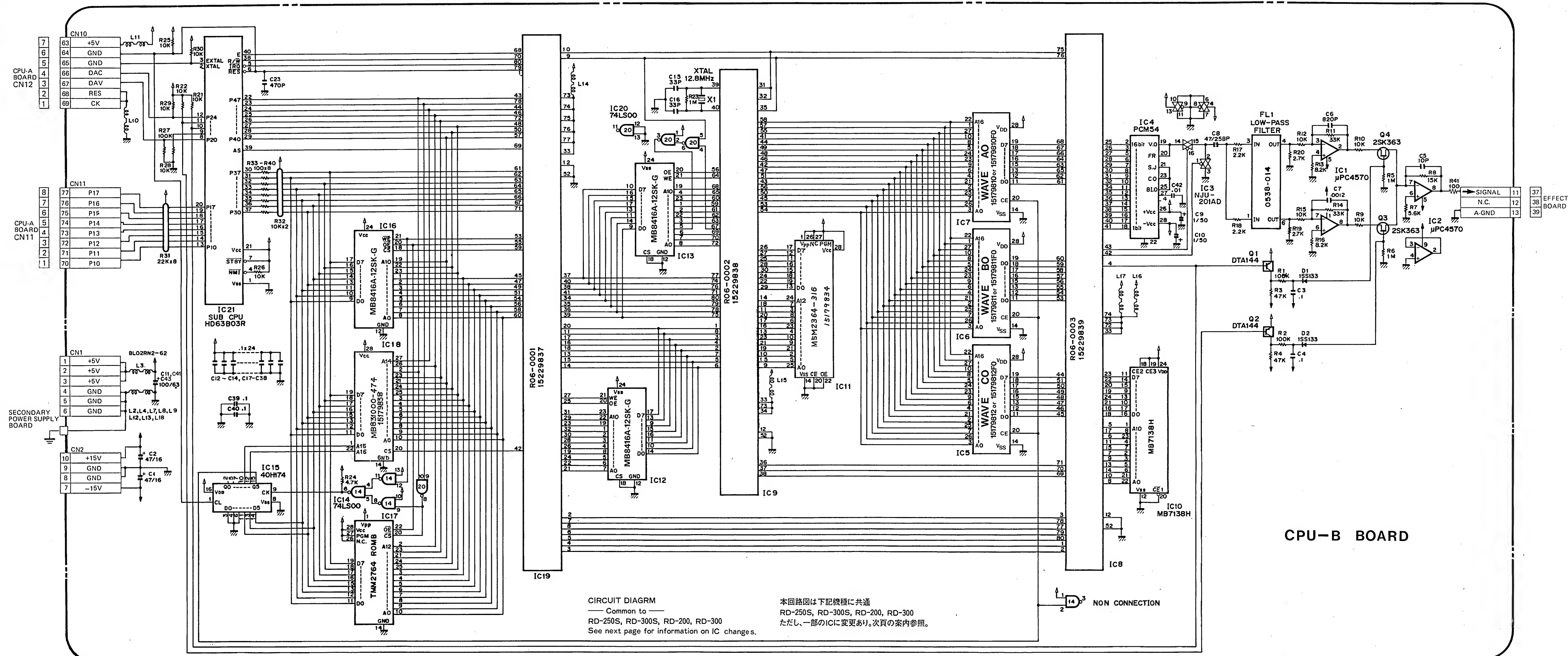
Table 1

MODEL	VOLTAGE		F1	F2, F3	HEAT SINK	WIRING	ASSY No.
RD-200	100/117V	FUSE LABEL	ULTSC 2A-N1 H224 [2.0A/125V]	ULTSC 800mA-N1 H220 [T800mA/125V]			7617709100
	220/240V	FUSE LABEL	CEE T2A #408 [T2A/250V]	CEE T315mA #400 [T315mA/250V]			7617709400
RD-250S RD-300 RD-300S	100/117V	FUSE LABEL	ULTSC 2A-N1 H224 [2.0A/125V]	ULTSC 800mA-N1 H200 [T800mA/125V]			7617533100
	220/240V	FUSE LABEL	CEE T2A #408 [T2A/250V]	CEE T315mA #400 [T315mA/250V]			7617533400
HP-2000 HP-3000 HP-3000S	100/117V	FUSE LABEL	ULTSC 2A-N1 H224 [2.0A/125V]	ULTSC 1.25A-N1 H222 [1.25A/125V]			7616933100
	220/240V	FUSE LABEL	CEE T2A #408 [T2A/250V]	CEE T500mA #402 [T500mA/250V]			7616933400
HP-4500 HP-4500S	100/117V	FUSE LABEL	ULTSC 2A-N1 H224 [2.0A/125V]	ULTSC 1.25A-N1 H222 [1.25A/125V]			7617416100
	220/240V	FUSE LABEL	CEE T2A #408 [T2A/250V]	CEE T500mA #402 [T500mA/250V]			7617416400





## CIRCUIT DIAGRAM





1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

CPU-B BOARD

7617512000

(pcb 22925348)

CPU-B board artwork is commonly used for many models. Consequently, some legends on the PCB differ from those ICs mounted, as shown below.

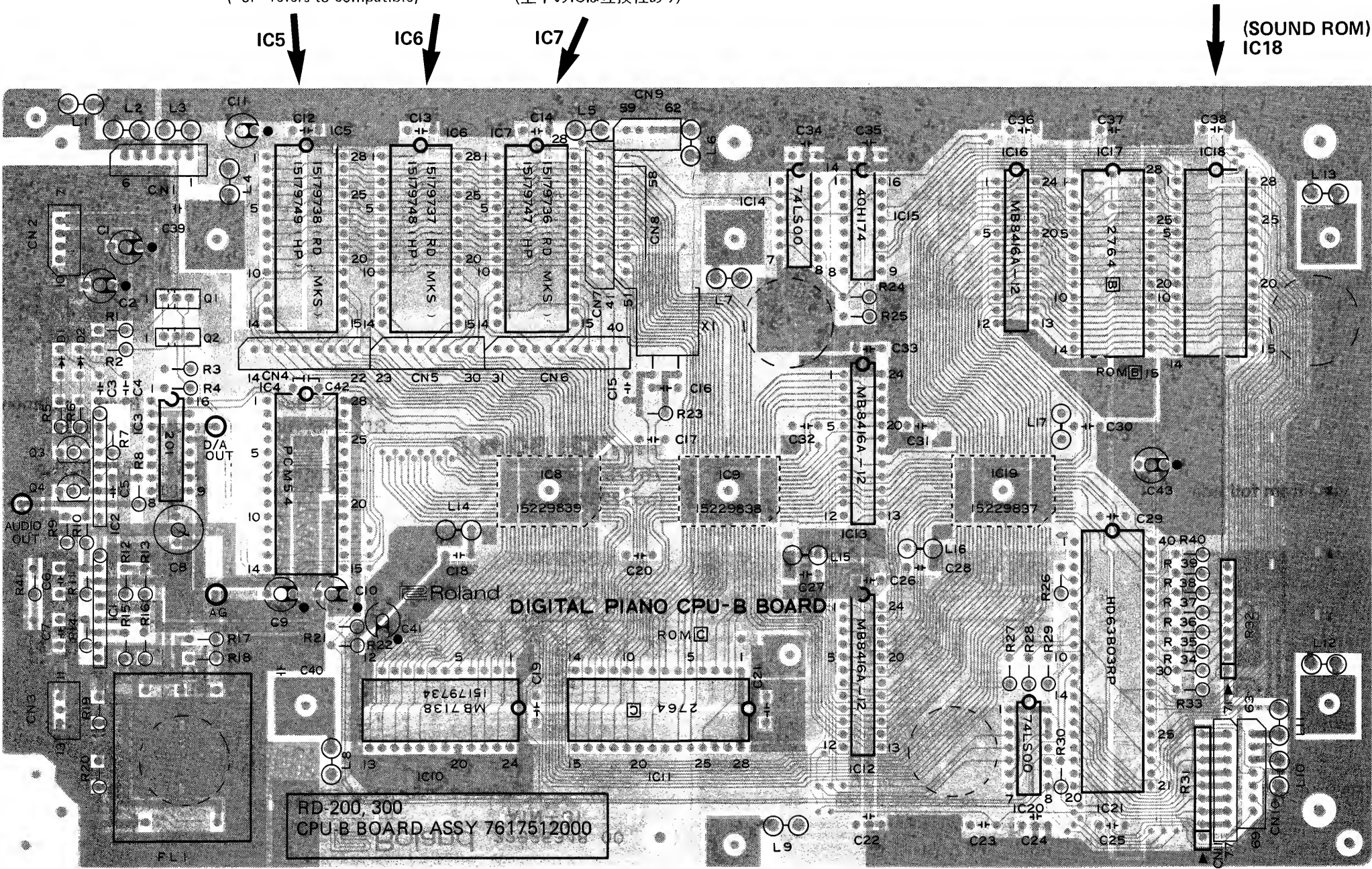
As an assembly, CPU-B board 7617512000 is common to RD-200, 300, 250S and 300S except for IC18 on some RD-200 and RD-300. MB831000-20P-G-474 is compatible with TC531000P-7465 and provides better quality sound.

CPU-B基板は複数の機種に使用されているので、一部ICの表示は実装品と異なる。

RD-200/300/250S/300SのCPU-B基板は基板完成品としても共通。  
ただし、RD-200/300のIC18 TC531000P-7465は、改良前の音色データ入り(互換性有)。

RD-250S RD-300S RD-200 RD-300	TC531000P-7467 (15179812) or MB831000-20P-G-473 (15179812F0)	TC531000P-7466 (15179811) or MB831000-20P-G-472 (15179811F0)	TC531000P-7465 (15179810) or MB831000-20P-G-471 (15179810F0)
("or" refers to compatible)		(上下のICは互換性あり)	

RD-250S RD-300S MB831000-20P-G-474 (15179838)	RD-200 RD-300 Same as left or TC531000P-7465 (15179810)
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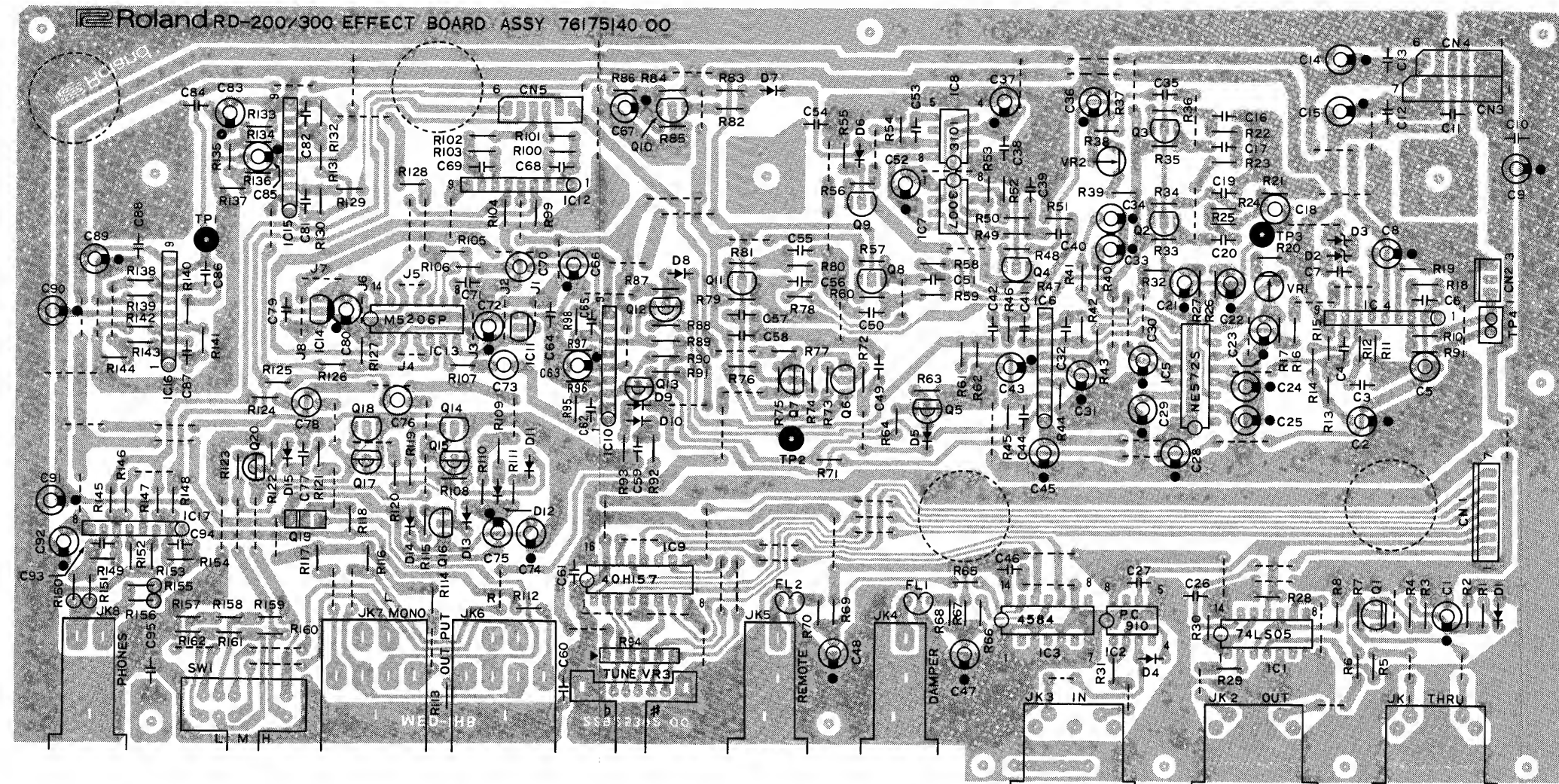




**EFFECT BOARD**

7617514000

(pcb 22925392)



view from foil side

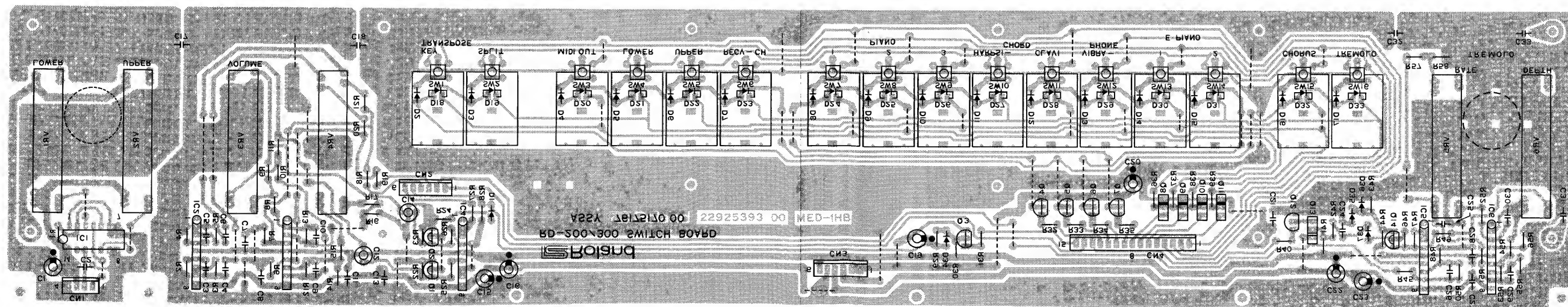
**SWITCH BOARD**

7617517000

(pcb 22925393)

EFFECT Board and SWITCH Board : common to  
RD-250S, RD-300S, RD-200 and RD-300

スイッチ基板、エフェクト基板は下記機種に共通  
RD-250S、RD-300S、RD-200、RD-300





## CIRCUIT DIAGRAM

The circuit diagrams below are common to —  
RD-200, RD-300, RD-250S and RD-300S

下記回路図はRD-200、RD-300、RD-250SおよびRD-300Sに共通

